

# **Assignment - 1**

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Here I have used 10 pre-trained models. Those are MobileNetV2, ResNet50, VGG16, EfficientNetB0, DenseNet121, NASNet, EfficientNetV2B0, InceptionV3, Xception and InceptionResNetV2.

Every model uses CIFAR100 dataset to classify 20 classes. In this dataset, there are present 40000 data are training data and 20000 data are for testing the model. For running those every model I have use the CPU.

Below given the accuracy for every model

Model Name	Accuracy	Model Size	
		Trainable Parameter	Non-Trainable Parameter
MobileNetV2	69.80%	25,620	2,257,984
ResNet50	5.65%	40,980	23,587,712
VGG16	25.80%	10,260	14,714,688
EfficientNetB0	5.00%	25,620	4,049,571
DenseNet121	66.05%	20,500	7,037,504
NASNetMobile	72.85%	21,140	4,269,716
EfficientNetV2B0	5.00%	25,620	5,919,312
InceptionV3	74.85%	40,980	21,802,784
Xception	76.70%	40,980	20,861,480
InceptionResNetV2	79.30%	30,740	54,336,736

From the above table, we can see that the highest accuracy I have found is in InceptionResNetV2 model, and the accuracy is 79.30%.

Also, the lowest accuracy is placed on EfficientNetB0 and EfficientNetV2B0 models. The accuracy of this model is 5.00%.